



CapitolVoice

Sierra Club California —Your Voice in the State Capitol

California's Global Warming Law — Now The Hard Work Begins

by Bill Magavern

In 2006 California's Legislature passed, and the Governor signed, landmark legislation putting an enforceable cap on our state's emissions of global warming pollution – the first such law in the United States. The Global Warming Solutions Act, AB 32, authored by Assembly Speaker Fabian Núñez and then-Assemblymember Fran Pavley, has garnered justifiable praise around the country and even overseas as a demonstration of California's willingness to fill the leadership vacuum left by the Bush Administration's refusal to take meaningful action to curb greenhouse gas emissions.

NOW THE HARD WORK BEGINS.

Far from the culmination, passage of the law represents the beginning of what will be a long and difficult process of implementing policies to bring California's greenhouse gas emissions down to their 1990 level by 2020. The Legislature has required a reduction to that level, and has wisely put the state's Air Resources Board in charge of making it happen. The ARB, which has built a reputation as the nation's premier guardian of air quality, now takes on the additional challenge of addressing global warming. Industry lobbyists are already flocking to the workshops and seminars on the topic, hoping to shape the eventual rules to benefit their narrow interests.

The ARB's first task, which will be on the agenda for its June 21st meeting in Los Angeles, is to publish a list of "Early Action Measures," those regulations that could be put in place before 2010 to start bringing down greenhouse pollution. ARB staff has put forward only three such measures: the Low-Carbon Fuels Standard announced by the Governor in a January executive order, methane capture requirements for landfills, and restrictions on refrigerants called hydrofluoro-

carbons that have high global warming potential. The Low-Carbon Fuels Standard will require a 10% reduction in the carbon intensity of transportation fuels by 2020, stimulating deployment of alternatives to gasoline.

Environmental groups, including Sierra Club California, have urged the ARB to take a bolder approach and add several other early action measures that reduce emissions from passenger vehicles, heavy-duty vehicles, cement factories, and marine vessels. These measures would provide double benefits by reducing both greenhouse gas emissions and other pollutants, like soot, smog, and mercury, that harm human health.

The ARB is also in the process of setting the "baseline" – the level of emissions in 1990 -- and of establishing a system for large emitters of greenhouse pollution to report their emissions. Advisory committees have been chartered on the topics of environmental justice, markets, and technology.

As implementation proceeds, many important questions will be debated and decided, including: how many emission reductions will come from technology standards and incentive programs, and how many from market mechanisms? Will the market mechanisms include a "cap-and-trade" program, as Governor Schwarzenegger has ordered? If so, will polluters be given permits to emit greenhouse gases, or will they have to buy them? Technology-based standards have a far better record of success than pollution trading schemes, especially when the right to emit is granted to polluters for free.

This implementation process will be a high priority for Sierra Club California this year and for years to come.

For more information on-line, go to www.climatechange.ca.gov and www.sierraclubcalifornia.org.



It May be Inconvenient, but it's Motivating...

by Bill Allayaud



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I was scared but also inspired when I saw *An Inconvenient Truth*; I walked out feeling that we may be at a tipping point in terms of public perception. Indeed, this turned out to be the case. I can only say thank you, thank you, Al Gore for catalyzing such awareness and change.

Recently, I attended a lecture on what I now refer to as “An Inconvenient Truth, California Style,” given by U.C. Santa Cruz Earth Sciences Professor Lisa Sloan. Dr. Sloan and her colleagues have high levels of confidence in their computer models that portray a very different California in just 40 to 50 years. We can expect many more very hot days, far less rain and snowfall, increased flooding in low-lying areas, and disruptions to the microclimates that make our state an agricultural giant and pleasant place to live.

But rather than being discouraged by these predictions, I am more motivated than ever to do something about global warming. Personally, I am evaluating all of my actions and am asking, “How much is this contributing to global warming, and can I do something to lessen it?” For years I have ridden my bike or taken the bus to work, conscientiously “reduced, reused, and recycled,” and I have watched my home heating and cooling very closely. Now I find myself consolidating or eliminating trips, looking at every product I buy to see where and how it was produced, and examining more closely all of my choices from entertainment to menu items. I hope I am not becoming insufferable, but I am also giving gentle nudges to friends and colleagues, asking them to consider the effect of their actions on our climate. Each one of us will have to commit to changing our own behavior in order to turn this thing around.

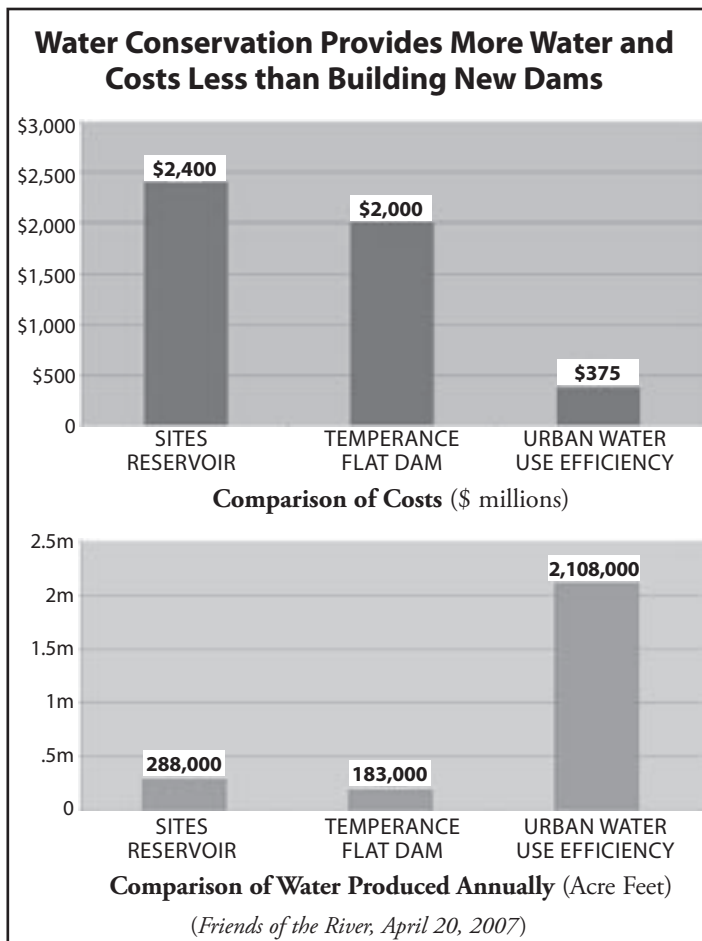
As this issue of our newsletter explains, your Sierra Club California lobbying team is working on solutions to climate change across many fronts. We knew that there would be an onslaught of bills introduced on the subject of global warming in 2007, based on the interest generated by *An Inconvenient Truth* and from the passage of the landmark bill, AB 32 in 2006. We were right! It seems that every other Democratic Senator and Assemblymember wants to be a part of the solution. That’s a good thing. Our job is to help them focus their ideas, and move the best bills to the Governor’s desk.

We are working on solutions like low-carbon fuels for cars and better land use planning, but any legislative answer will not be easy. For every corporation or business that announces a new “green initiative” to combat global warming, there are a dozen companies that will fight tooth and nail to keep the status quo. But Sierra Club California is up for the fight. With your support, we can continue to have the strategic and analytical capacity to take on those who will stand in the way of progress at a time when the stakes could not be higher.

Does Climate Change Mean More Dams for California?

by Jim Metropulos

In his 2007 State of the State address, Governor Schwarzenegger proposed building two new dams as part of his water infrastructure plan for California. He and Republican legislators followed up with Senate Bill 59 by Senator Cogdill (R-Modesto), a \$4.5 billion water bond proposal for the November 2008 ballot that would pay half the costs of two new reservoirs. The two dams proposed are Temperance Flat, a reservoir on the San Joaquin River east of Fresno, and Sites Reservoir, off the Sacramento River west of Maxwell in Colusa County. His plan renews the battle between dam proponents – agriculture, developers, and water agencies – and those that would like to see the state instead invest in water efficiency, water recycling, and underground water storage.



Sources: Preliminary Project Cost and Water Supply Benefit Estimates, California Department of Water Resources, February 2007; Water Use Efficiency Comprehensive Evaluation, CALFED Bay-Delta Program, April 2006.

In pushing his water plan, Governor Schwarzenegger raises the novel argument that new dams are needed because of global warming. He has part of the argument right. Scientists predict that global warming will cause more precipitation to fall as rain instead of snow. This will reduce mountain snowpack, where much of the state's water is naturally stored. As temperatures rise, the snowpack will shrink, leaving a water storage void the administration says should be filled in part with new reservoirs.

Yes, the state's snowpack is likely to shrink as the Earth warms. However scientists disagree on where and how, making it difficult to know whether these proposed dams would be positioned properly to capture the melting snow pack. Many of these scientists believe that the state's system of more than 1,200 major dams is already adequate to handle the increased precipitation caused by global warming. One problem with the Governor's water plan is that environmental studies for these projects are not yet completed so we can not determine their effectiveness and impacts.

Another important consideration is that the California Energy Commission has identified water consumption as the single largest category of energy use in the state. The water sector uses a large amount of energy to capture, treat, transport, and use water. As a result, California's water-related energy consumption accounts for 19% of all electricity and over 30% of all natural gas used in the state. Water delivery and use therefore greatly contributes to greenhouse gas emissions.

Notably, new research suggests that the Governor's water plan may actually aggravate climate change. In recent years, scientists have documented that dams may pump greenhouse gases into the atmosphere in different ways. First, the process of cement making, required in large quantities for the construction of these dams, is already a major source of greenhouse gas emissions into the atmosphere. Second, when the land behind the dam is flooded, vegetation rots, releasing carbon dioxide and methane. These emissions continue throughout the life of the dam as more organic material washes in from upstream. One study estimated that Shasta Lake, the state's largest reservoir, releases 224 tons of carbon dioxide per day. That's equal to 14,500 cars driving 40 miles each day.

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Forest Loss — A Climate Threat

by Paul Mason

Carbon Sequestration: the process of capturing and storing carbon. For example, trees turning atmospheric carbon dioxide into wood.

When people think about global warming and climate change, we usually think about emissions from cars, factories and power plants. But the changes that we have wrought on the forested landscape have also had a major effect on our climate.

In California, since 1700, we have converted approximately 40% of our native forestland to other uses through urbanization and agricultural conversion. This is hardly surprising, when you think of all the cities, towns, and agriculture located in formerly forested areas. However, even now that we understand the impacts to climate change, not to mention habitat loss, California continues to lose forestland at an alarming rate.

According to the California Department of Forestry and Fire Protection (CDF), each year between 1989 and 2000, nearly 70,000 acres received some level of development. Of that total, nearly 28,000 acres per year was divided into relatively small lots, with at least one house per 20 acres. CDF estimates that between 2000 and 2020, California will lose nearly 5% of its forested area to other non-forest uses.

The reason for these conversions is primarily economic – these forestlands are oftentimes more valuable as real estate than for timber production, and landowners are predictably seeking to maximize economic return. Estate taxes provide another perverse incentive to sell off forestland for development.

The issue of how to preserve our remaining forestland and increase our capacity for carbon sequestration in trees, has moved to the forefront because the state anticipates achieving 20% of the carbon reductions required by AB 32 through forest activities. Although the details are very much still under development, four general approaches have been identified: reforestation, improved forest management, fuels reduction, and urban forestry.

In order to meet the goals established by the Global Warming Solutions Act (AB 32), the Air Resources Board wants forests to capture an additional 16 million tons of carbon annually by 2020. Of course, since trees planted this year will still be young saplings in 2020, the carbon ultimately sequestered

Forestry Programs to Address Global Warming

The California Department of Forestry and the California Air Board have identified several categories of actions that can help increase the rate and volume of carbon sequestered in California's forests and trees. These programs are estimated to sequester 16 million metric tons of carbon dioxide annually by the year 2020. In contrast with other emission sectors, the benefits of forests will naturally increase over time as the trees grow.

Urban Forestry – Partnering with local government and private organizations, plant 5 million trees in urban areas by 2020. In addition to carbon sequestered in the trees, urban forests have numerous other benefits, including cooling “heat islands” such as streets and parking lots, reducing air conditioning needs, and improving aesthetics and property values.

Fuels Management & Biomass – Thinning overly dense, young forests to increase the growth rate of the remaining trees, and reduce the risk of catastrophic wildfire. Wildfires can release enormous amounts of carbon, so reducing the size and likelihood of fires has important climate implications. Additionally, biomass can be used to replace fossil fuels for heating and energy, though the number of biomass facilities close to forestland is currently somewhat limited.

Forest Conservation & Improved Management – Voters approved \$250 million in Prop 84 for acquisition and conservation of forests. Additionally, there could be new incentives for managing commercial forestland on longer rotations, increasing the amount of carbon stored in “working” forests. The California Climate Action Registry “Forest Protocols” require forests enrolled in this program to be managed as natural forests, with native species of multiple ages, and require the forestland to be protected from development with a conservation easement.

Reforestation – Many areas of California have lost their historical natural forest and need to be replanted. This includes areas recently denuded which have not regrown, such as areas burned by intense wildfire. When applied to areas, that have been without forest for many years, the process is sometimes known as afforestation, which could include many of California's streamside riparian areas which the State Water Board estimates have lost up to 98% of their historic riparian forests.

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Time for Action

Land Use Planning and Global Warming

by Bill Allayaud

It is relatively easy to comprehend some of the steps we will have to take to overcome climate change caused by the emission of greenhouse gases. We all know that having cars get more miles per gallon is a clear solution. The emissions from large gas and coal consuming power plants are also an obvious problem and the move to renewable sources of energy is underway.

But, it will be much harder to address the impact of the routine driving we do during the course of our day. We drive to shop, drop children off at school or soccer games, to socialize, and to get to work. Much of this driving is due to existing development patterns, making it necessary that appropriate land use planning be a mandatory element in actions taken to confront the threat of global climate change. The standard suburb is at the heart of the problem. We need to change how we design our livable space in order to reduce the need to jump into our cars to do just about anything. Is anyone addressing this part of the problem?

The Governor's Climate Action Team established goals for reductions in greenhouse gas emissions from all sectors. They attribute a large percentage (about 15%) of the reduction in greenhouse gases from what they term as "smart land use and intelligent transportation." Their report states:

Smart land use is an umbrella term for strategies that integrate transportation and land-use decisions. Such strategies generally encourage jobs/housing proximity, promote transit-oriented development, and encourage high-density residential/commercial development along transit corridors. These strategies develop more efficient land-use patterns within each jurisdiction or region to match population increases, workforce and socioeconomic needs for the full spectrum of the population. (*Final 2006 Climate Action Team Report to the Governor and Legislature, April 2006*)

The Climate Action Team report doesn't include a roadmap on how to get this done. Essentially, that's because State officials, like the Governor and the Legislature, are loath to tell local officials, like city councilpersons and county supervisors, how to make land use decisions. The Governor and Legislature rarely encourage local governments to stop approving sprawling subdivisions, let alone mandate that they must only approve compact, efficient development.

So why doesn't Sierra Club California get legislation passed that would mandate compact, efficient development that saved open space and farmland and that reduced the amount of driving we do? The truth is, legislators are reluctant to carry such simple yet powerful legislation because they feel the potent combination of the development industry and local government would immediately kill such legislation.

This year, Senate Bill 375 by Darrell Steinberg (D-Sacramento) is the first attempt in many years to take on the issue. The bill aims to give a financial incentive to local governments to plan more compact development by having the regional transportation agencies dole out money based on having "smart growth" plans. Sierra Club California is working with Senator Steinberg to refine some of the problematic aspects of SB 375, but it's a start.

Historically most environmental solutions have been developed after constituents demanded action. We must

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Priority Environmental Bills for California

▲ **Cleaning the Air on Roads:** Sierra Club California is sponsoring the Healthy Heart and Lung Act, AB 233 by Dave Jones (D-Sacramento), because of the need to reduce emissions of hazardous diesel exhaust from trucks and other engines. Soot from diesel-fueled engines is an extremely dangerous air pollutant that has been linked to lung cancer, chronic bronchitis, asthma episodes, heart attacks and strokes, hampered lung growth in children, and premature deaths. The California State Air Resources Board (CARB) has linked diesel particulates to approximately 3,000 premature deaths each year, as well as thousands of hospitalizations for respiratory illnesses. AB 233 would reduce public exposure to dangerous diesel emissions by improving enforcement of diesel emission protections, increasing penalties for violators, and preventing the importation of additional old, dirty trucks into our state.

▲ **Cleaning the Air at Ports:** Ports are the single largest source of diesel pollution in the Los Angeles region — the most polluted metropolitan area in the entire country. West Oakland also suffers from severe port-related diesel pollution. SB 974 by Alan Lowenthal (D-Long Beach) would mitigate air pollution from those ports and increase efficiency by collecting \$30 for each shipping container moving through the ports of Los Angeles, Long Beach and Oakland. The funds would go to improve air quality and reduce congestion in the port areas.

▲ **Getting Kids Outdoors:** “Nature Deficit Disorder” is a term coined by author Richard Louv in his best-selling book, *Last Child in the Woods*. Too many kids are out of touch with the natural environment. That’s why the Sierra Club’s Building Bridges to the Outdoors program has been getting underserved youth into outdoor environmental education programs for a number of years. SB 207 by Alex Padilla (D-San Fernando Valley) will create this type of program in the State Department of Parks and Recreation. The department would make grants to schools and nonprofits to get youth who would not otherwise be able to go, into after-school and weekend outdoor education programs. Sierra Club California is sponsoring this bill.

▲ **The Climate Change and Water Resource Protection Act of 2007:** Sierra Club California supports AB 224 by Lois Wolk (D-Davis) because it is imperative for California to prepare for and minimize the impacts of climate change

on the state’s water supply. This bill would require the Department of Water Resources, as part of its statewide water resource management responsibilities, to include an analysis of the potential effects of climate change in its reports or plans and would require water suppliers, when updating their water management plans, to include information on potential climate change impacts to their water supply. It would also direct the State Water Resources Control Board to quantify the potential energy savings and greenhouse gas emission reductions from a variety of water conservation and recycling scenarios. This bill will increase the capacity of the state and local water agencies to adapt water systems to climate change and incorporate it into long-term planning efforts.

▲ **Kicking the Oil Habit:** Momentum is building for major legislation to reduce petroleum dependence and develop cleaner alternative fuels for transportation. Senator Christine Kehoe (D-San Diego) has introduced SB 210, which would put into law Governor Schwarzenegger’s proposal for a Low-Carbon Fuel Standard, but with additional protections for air quality and environmental justice. Along with Senate President pro tem Don Perata (D-Alameda), Senator Kehoe has also authored SB 494, which would require that half of all new vehicles sold in California in 2020 be clean alternative vehicles. Assembly Speaker Fabian Núñez and Assemblymember Kevin DeLeon, both Democrats from Los Angeles, have each proposed bills to provide funding for alternative fuel research, development and deployment.

▲ **Recycling Toxic Mercury Thermostats:** Sierra Club California is sponsoring The Mercury Thermostat Collection Act, AB 1193 by Ira Ruskin (D-Silicon Valley), which would establish a financial incentive for recycling of mercury thermostats. These thermostats contain 3,000 milligrams of mercury, a potent neurotoxin that persists in the environment and bioaccumulates in the food chain. Mercury thermostats sold before 2006 — when a Sierra Club California-sponsored sales ban took effect — continue to be dumped, in violation of hazardous waste law, because of the lack of a convenient recycling infrastructure. In fact, fewer than 5% of the mercury thermostats going out of service in California are recycled. AB 1193 would address the problem by placing responsibility on those companies that have profited and continue to profit from selling thermostats in California.

Please go to www.SierraClubCalifornia.org to join our legislative action alert system.

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by reforestation efforts will increase more substantially in the future—assuming the trees are left to grow. This is important because although reforestation efforts may seem like a relatively expensive way to capture carbon when viewed over the next 10-15 years, it becomes much more cost effective over the course of the next century.

Trees are a very efficient way to capture and store carbon — approximately half of the weight of a tree is carbon. However, it is also important to understand that a large portion of this carbon is lost and released during logging. In a typical California forest, approximately 2/3 of the carbon is above ground, with the remainder in roots and soil. Roughly 60% of the volume of the forest makes it to the mill (branches and slash are generally left in the forest). Then there is some level of inefficiency at the mill when the trees

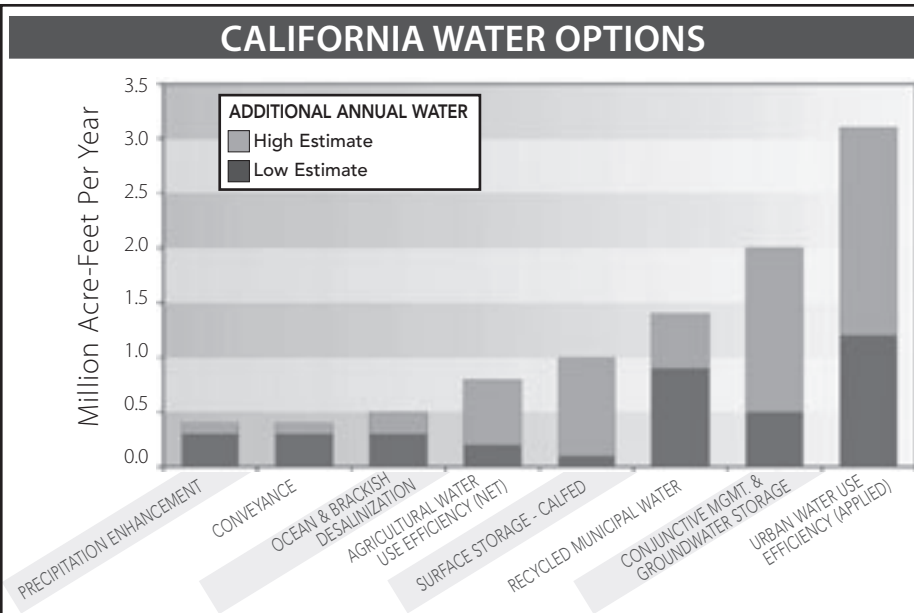
are turned into lumber. All told, only 25-50% of the carbon in a forest ends up in lumber, probably closer to one third. Of course, the destiny of that lumber then becomes critical — if it is used to build a house it will stay sequestered for some time, whereas other uses such as wooden pallets or paper would have a much shorter lifespan before the carbon is re-released into the atmosphere.

There are a whole host of issues to address as the focus on forests turns toward their contribution to carbon sequestration. It will be important to remember that forests have many other values, such as habitat and water quality. And we'll need to be realistic and proactive in how we manage forests to make sure that the hotter, drier California of the future continues to have forests that are diverse, productive, and long-lived.

▲ California Dams, continued from page 3

Sierra Club California has solid reasons for opposing the Governor's plan for more dams. First, additional environmentally destructive dams and reservoirs are not needed. The state's own 2005 California Water Plan, prepared by the Department of Water Resources, shows that water use has declined and will continue to decline if we invest wisely in efficiency, reclamation, and additional groundwater storage.

In fact, over the last 40 years per capita consumption of water has been cut in half. The Water Plan indicates that we can generate more than four million acre-feet of water per year through urban water use efficiency and recycling alone. Investments in these areas would reliably produce three to four times as much water as can be expected from Sites and Temperance Flat at a fraction of the cost.



This graph from the 2005 California Water Plan, prepared by the *California Department of Water Resources*, shows the potential range of additional water from eight different sources. More water can be generated from greater urban water use efficiency than from dams (Temperance Flat, Sites Reservoir and 3 other dam proposals are included under the bar labeled “Surface Storage–CALFED”)

At the first committee hearing on the governor's water proposal, Democrats on the Senate Natural Resource and Water Committee rejected the Governor's water bond. Committee Chair Senator Darrell Steinberg (D-Sacramento) questioned whether the bond was financially feasible. At this time, no farmers or water agencies have stepped forward to agree to pay for their share of the costs and no agreements for the water have been secured. The committee also noted that there were no final studies showing what the projects would cost or the amount of water they would provide. Finally, the backers of the bond have failed to show how the proposed dams could help repair the environmentally sensitive and degraded Sacramento-San Joaquin Delta.

Despite the defeat of the water bond in the committee, Governor Schwarzenegger

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create an atmosphere which encourages and empowers our State officials to enact appropriate legislation that deals with land use issues. And the time to do that is now, as there is more at stake than saving our most productive farmland from sprawl and that last wonderful piece of open space on the edge of town.

While we lobby to spur the Legislature, an alternative approach is to pressure individual cities and counties to adopt urban growth boundaries, allowing only logical, paid-for extensions of urban services and new development, while preserving open space and having much stronger transit options. If local officials balk, it may be necessary to take it to the voters as a local ballot measure. While that is expensive and energy consuming, sometimes it's the best and only way to get it done.

For some good reading on fighting sprawl and its impacts on climate change, go to this page at the Sierra Club website: <http://www.sierraclub.org/sprawl/>

vows to continue to press for dam construction. That sets the stage for the Governor to negotiate for more dams during the budget negotiations that will take place with legislative leaders. Republicans also say they are willing to take the issue of more dams to the voters in the form of a ballot initiative.

We will defeat that initiative and similar proposals because Sierra Club California can show that vigorous state investment in water conservation, water recycling, and groundwater storage trumps the need for more dams. By promoting a serious agenda of water conservation, Governor Schwarzenegger can put California in a leadership role in addressing water supply issues that effect all of the western states. It would also create new technologies and jobs, and strike a major blow for reducing greenhouse gas emissions by moving us away from energy intensive water pumping. By doing so, California will produce more water and cause less environmental harm than building costly new dams.

What's Inside This Issue...

Last year the California Legislature passed, and the Governor signed, AB32, an historic bill that will pave the way to reduced greenhouse gas emissions and begin the work needed to confront Global Climate Change. We now face the daunting task of implementing the changes mandated in that bill in a substantive and efficient way. This issue of *Capitol Voice* is jam-packed with information on the wide range of ways in which issues related to Global Climate are being addressed, and still need to be addressed, in Sacramento.

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